

What is claimed is:

1. An isolated anti-DR4 antibody having the same biological characteristics of the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695.
2. An isolated anti-DR4 antibody having the same biological characteristics of the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12694.
3. An isolated anti-DR4 antibody having the same biological characteristics of the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Patent Deposit Designation PTA-99.
4. An isolated anti-DR4 antibody wherein the antibody binds to the same epitope as the epitope to which the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695 binds.
5. An isolated anti-DR4 antibody wherein the antibody binds to the same epitope as the epitope to which the monoclonal antibody produced by the hybridoma cell line deposited under the American Type Culture Collection Accession Number ATCC HB-12694 binds.
6. An isolated anti-DR4 antibody wherein the antibody binds to the same epitope as the epitope to which the monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Patent Deposit Designation PTA-99.
7. The hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695.
8. The hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12694.
9. The hybridoma cell line deposited under American Type Culture Collection Patent Deposit Designation PTA-99.
10. The monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12695.
11. The monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Accession Number ATCC HB-12694.

12. The monoclonal antibody produced by the hybridoma cell line deposited under American Type Culture Collection Patent Deposit Designation PTA-99.
13. An isolated anti-DR4 antibody comprising a light chain variable domain, wherein said variable domain comprises amino acid residues 20 to 126 of SEQ ID NO:9.
14. The anti-DR4 antibody of claim 13, wherein said antibody further comprises a light chain CH1 domain comprising amino acid residues 127 to 233 of SEQ ID NO:9.
15. The anti-DR4 antibody of claim 13, wherein said antibody further comprises a light chain signal sequence comprising amino acid residues 1 to 19 of SEQ ID NO:9.
16. The anti-DR4 antibody of claim 13, wherein said antibody further comprises a heavy chain variable domain comprising amino acid residues 20 to 145 of SEQ ID NO:12.
17. The anti-DR4 antibody of claim 16, wherein said antibody heavy chain further comprises CH1, CH2, and CH3 domains comprising amino acid residues 146 to 476 of SEQ ID NO:12.
18. An isolated nucleic acid encoding a chimeric anti-DR4 antibody which includes a light chain variable domain comprising amino acid residues 20 to 126 of SEQ ID NO:9 and a heavy chain variable domain comprising amino acid residues 20 to 145 of SEQ ID NO:12.
19. A vector comprising the isolated nucleic acid of claim 18.
20. A host cell comprising the vector of claim 19.
21. The host cell of claim 20 which is an *E. coli*.
22. The host cell of claim 20 which is a Chinese Hamster Ovary cell.
23. The host cell of claim 20 which is a yeast cell.
24. A method of producing an anti-DR4 antibody comprising culturing the host cell of claim 20, and recovering the antibody from the host cell culture.
25. An isolated anti-DR4 monoclonal antibody having a binding affinity of at least 10^8 M^{-1} to 10^{12} M^{-1} to the DR4 receptor.
26. The anti-DR4 antibody of claim 25 comprising a chimeric antibody.
27. The anti-DR4 antibody of claim 26 comprising a humanized antibody.
28. The anti-DR4 antibody of claim 25 comprising a human antibody.

29. A method of inducing apoptosis in mammalian cancer cells comprising exposing mammalian cells to an effective amount of an anti-DR4 chimeric antibody.
30. The method of claim 29, wherein said mammalian cancer cells comprise colon cancer cells.
31. A method of treating cancer in a mammal, comprising administering to said mammal an effective amount of DR4 antibody.
32. The method of claim 31, wherein said cancer is colon cancer.
33. The method of claim 31, wherein said cancer is lung cancer.
34. A method of treating an immune-related disease in a mammal comprising administering to said mammal an effective amount of agonist DR4 antibody.
35. The method of claim 34, wherein said DR4 antibody comprises a chimeric antibody.
36. The method of claim 34, wherein said immune-related disease is arthritis.
37. The method of claim 34, wherein said immune-related disease is an autoimmune disease.